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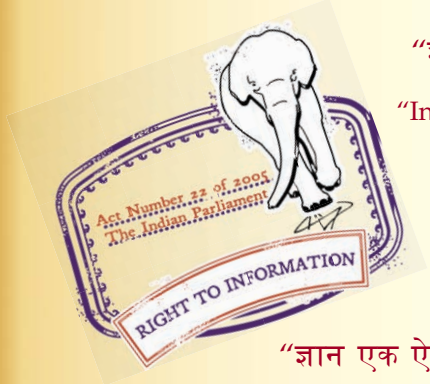

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"Knowledge is such a treasure which cannot be stolen"

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SPECIFICATION FOR SHARE FOR TRACTOR-OPERATED MOULDBOARD PLOUGHS

UDC 631·512·2 : 631·312·4·021·4

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MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 3

March 1984

Indian Standard

SPECIFICATION FOR SHARE FOR TRACTOR-OPERATED MOULDBOARD PLOUGHS

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(*Continued on page* 2)

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Indian Standard

SPECIFICATION FOR SHARE FOR TRACTOR-OPERATED MOULDBOARD PLOUGHS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 10 October 1983, after the draft finalized by the Soil Working Equipment Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 The share is an important soil engaging component of mouldboard plough bottom. Being soil engaging part, it wears out earlier than other components and has to be replaced frequently. Therefore, to ensure interchangeability, necessary dimensions of the shares have been specified in this standard.

0.3 This standard is related to the manufacturing and trade practices prevailing in the country.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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1. SCOPE

1.1 This standard specifies material, dimensional and other requirements for shares for tractor-operated mouldboard ploughs.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in 2 of IS : 6327-1971† shall apply.

*Rules for rounding off numerical values (*revised*).

†Specification for one-way animal drawn mouldboard plough shares.

3. TYPES

3.1 On the basis of the dimensions, the share shall be of the following 7 types:

a) Type 1,
b) Type 2,
c) Type 3,
d) Type 4,
e) Type 5,
f) Type 6, and
g) Type 7.

4. MATERIAL

4.1 The share shall be manufactured from chilled cast iron or steel conforming to Grade 75C6 of IS : 1570 (Part 2)-1979*. Steel equivalent or better than this grade may also be used. The composition of Grade 75C6 is given below for guidance:

Carbon	0·70 to 0·80 percent
Manganese	0·50 to 0·80 percent

NOTE — The sulphur and phosphorus content shall not be more than 0·05 percent each.

4.2 The material for bar point shall be 40C8 or 55C8 of IS : 5517-1978†.

5. HARDNESS

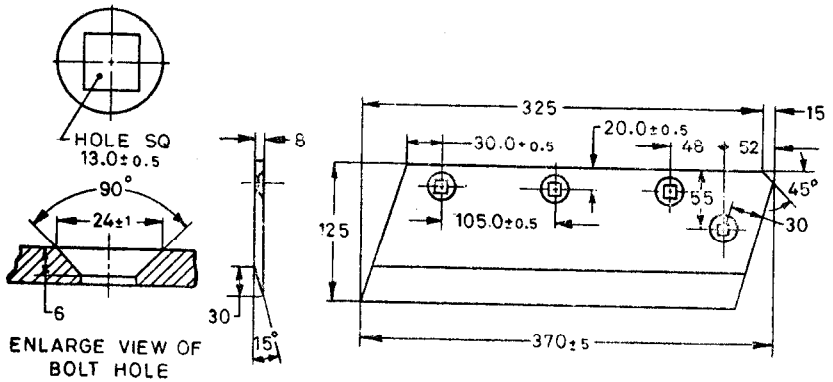
5.1 The chilled cast iron shares shall have a Brinell hardness of 360 to 400 *HB* when tested in accordance with IS : 1789-1961‡ and depth of chilling shall be not less than 1·5 mm.

5.2 The cutting edge of steel share shall be hardened and tempered to give a Brinell hardness of 350 to 450 *HB* when tested in accordance with IS : 1500 - 1968§.

6. DIMENSIONS AND TOLERANCES

6.1 The dimensions of types 1 to 7 plough shares shall be as given in Fig. 1 to 7. The tolerances on the dimensions unless indicated otherwise, shall be ± 10 percent.

*Schedules for wrought steels for general engineering purposes: Part 2 Carbon steels (unalloyed steels) (*first revision*).
†Steel for hardening and tempering (*first revision*).
‡Method for Brinell hardness test for grey cast iron.
§Method for Brinell hardness test for steel (*first revision*).



All dimensions in millimetres.

FIG. 1 TYPE 1 SHARE

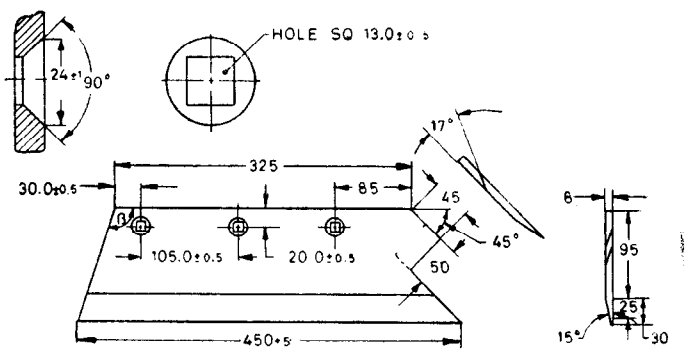
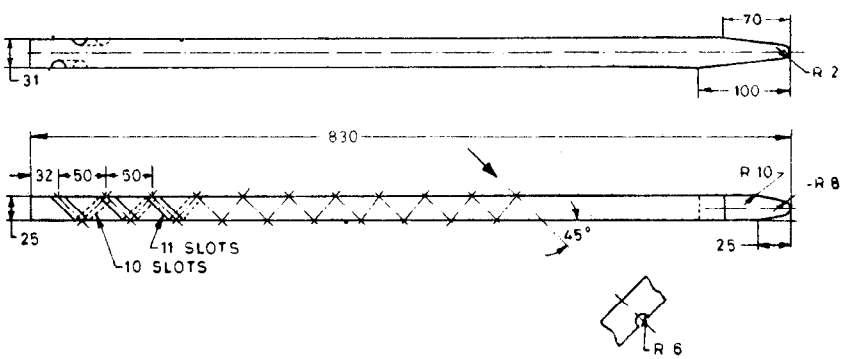


FIG. 2 TYPE 2 SHARE



All dimensions in millimetres.

FIG. 2(a) BAR

6.2 The dimensions of bar for plough share shall be in accordance with Fig. 2(a).

7. OTHER REQUIREMENTS

7.1 The cutting edge of the share shall be bevelled to a distance not more than 10 mm. The thickness of the cutting edge shall be between 0·5 to 2 mm and should be uniform, as far as possible.

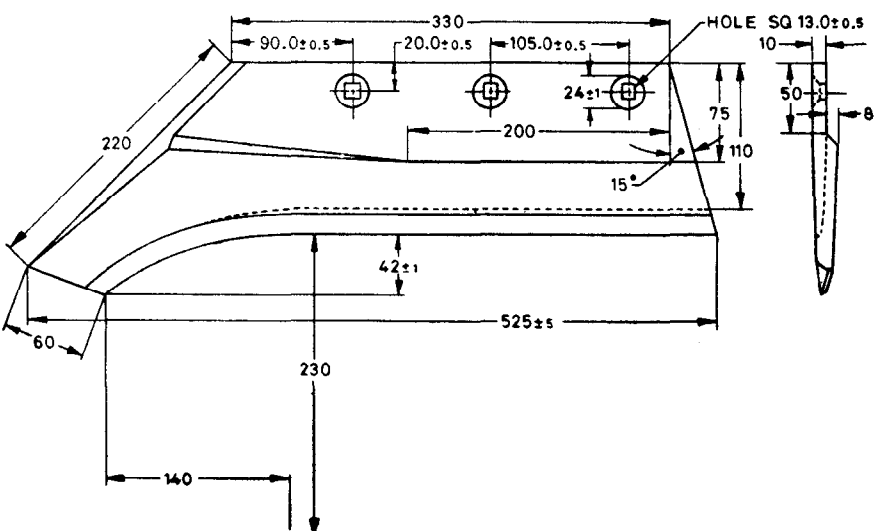
7.2 The counter sunk bolts of 10 mm size shall be used for fixing the share with the frog. As far as possible, the bolt of M 10 size should be used.

7.3 The shares shall be supplied with bolts in holes.

8. FINISH AND WORKMANSHIP

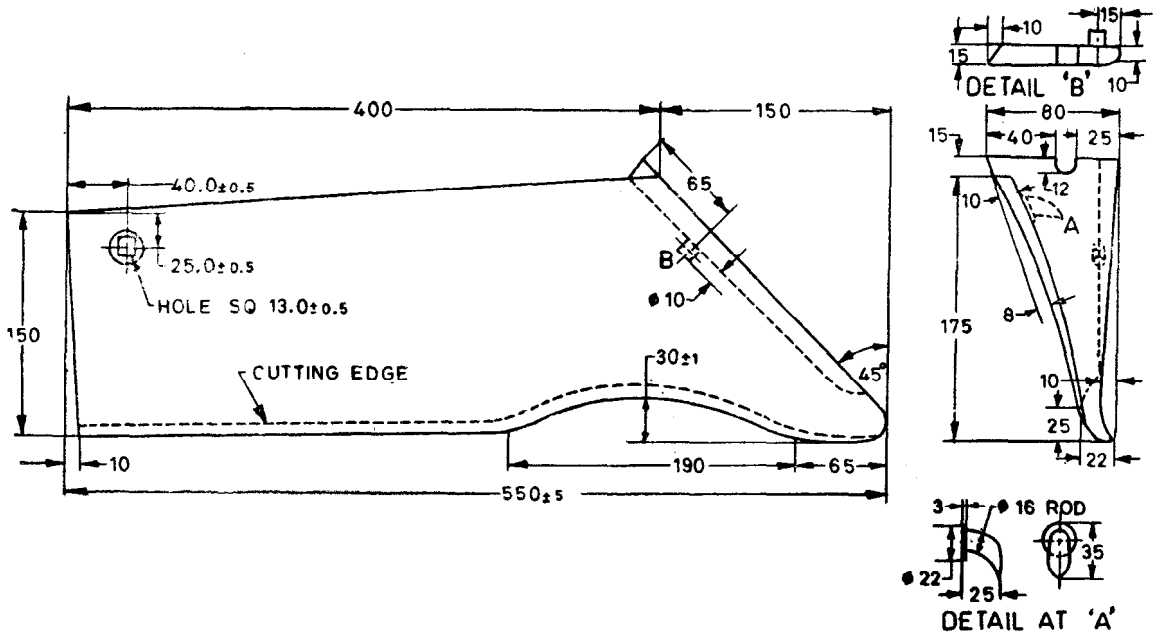
8.1 The shares shall be free from flaws, scratches, cracks and other defects. All fins, burrs, flashes and sharp edges other than the cutting edge shall be removed.

8.2 In case of steel shares, the welding of gunnel shall be satisfactory in all respects. The welding shall not be porous.



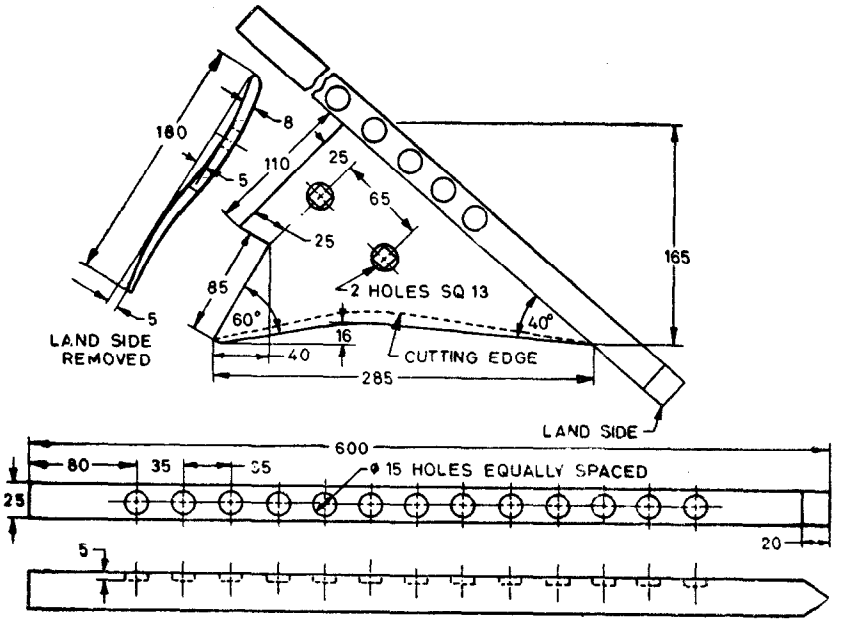
All dimensions in millimetres.

FIG. 3 TYPE 3 SHARE



All dimensions in millimetres.

FIG. 4 TYPE 4 SHARE



All dimensions in millimetres.

FIG. 5 TYPE 5 SHARE

8.3 A coating of protective paint or grease on soil-facing surface of the share shall be provided. The bottom surface not in direct contact with soil shall have an anti-rust paint coating.

9. MARKING AND PACKING

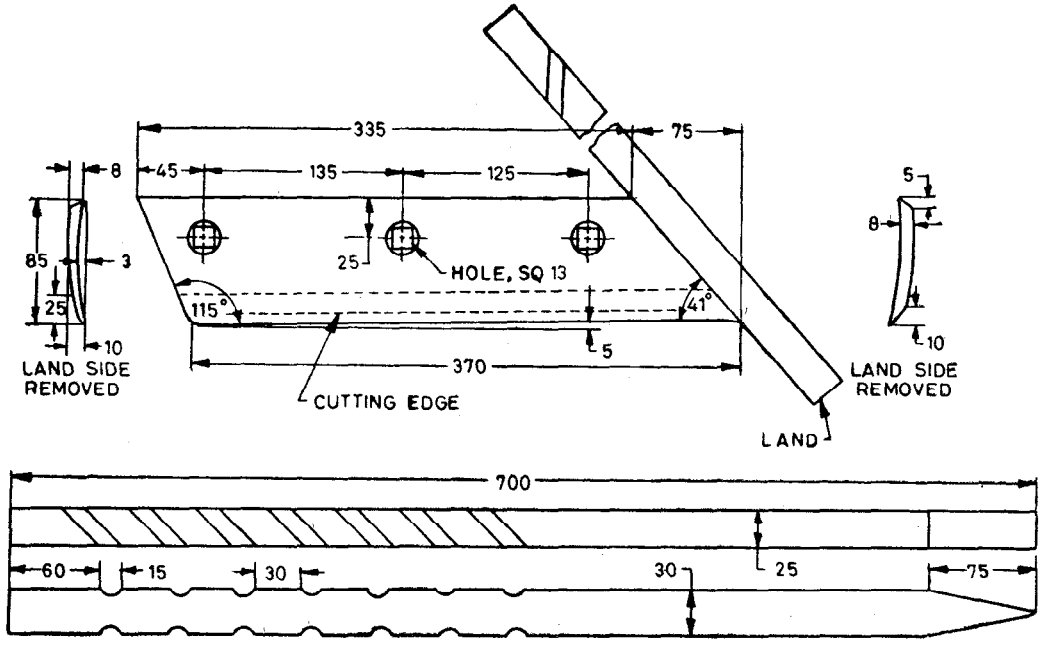
9.1 The shares shall be marked with the following particulars:

a) Manufacturer's name and recognized trade-mark, if any;

b) Size;

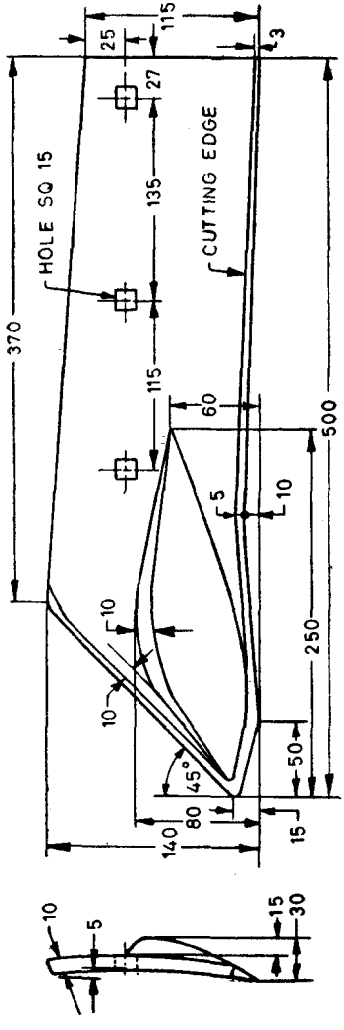
c) Type; and

d) Batch or code number.



All dimensions in millimetres.

FIG. 6 TYPE 6 SHARE



All dimensions in millimetres.

FIG. 7 TYPE 7 SHARE

9.1.1 Each share may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

9.2 Packing — The shares of same type may be packed together for safe handling in transit and storage.

10. SAMPLING FOR LOT ACCEPTANCE

10.1 Unless otherwise agreed to between the purchaser and the supplier, the sampling of the share for lot acceptance shall be done in accordance with 3 of IS : 7201-1974*.

*Methods of sampling of agricultural machinery and tractors.

INDIAN STANDARDS

ON

SOIL WORKING EQUIPMENT

IS:

1976-1976 Rotary paddy weeder (*second revision*)
2192 (Part 1)-1976 Animal drawn mouldboard plough: Part 1 Turnwrest type (*first revision*)
2192 (Part 2)-1976 Animal drawn mouldboard plough: Part 2 Fixed type
2564-1979 Animal-drawn blade harrow, *GUNTAKA* type (*first revision*)
2965-1979 Rodger animal drawn (*first revision*)
3185-1965 'V' blade hand hoe
3292-1965 Three tined hand hoe, fixed type
3293-1965 Levelling *KARAHA* (*KANI*), animal drawn
3301-1965 Green manure trampler, animal drawn
3342-1979 Animal drawn cultivator (*first revision*)
3360-1965 Soil scoop
3363-1965 Harrow *PATELA*
3369-1965 Puddler, animal drawn
3372-1965 Bund former
3467-1966 Wheel hand hoe
3606-1972 Disc harrow animal drawn (*first revision*)
4366 (Part 1)-1972 Agricultural tillage discs: Part 1 Concave type (*first revision*)
4366 (Part 2)-1972 Agricultural tillage discs: Part 2 Flat type (*first revision*)
6023-1970 Reversible shovel
6288-1971 Test code for mouldboard ploughs
6327-1971 One-way animal drawn mouldboard plough shares
6451-1972 Sweep
6459-1972 Two-way animal drawn mouldboard plough shares
6635-1972 Tractor operated disc harrows
6638-1972 Spring loaded tractor-mounted cultivators
7015-1972 Glossary of terms relating to farm implements and machinery
7230-1974 Plain spool for tractor operated disc harrows
7256-1974 Plain spool for animal-driven disc harrows
7353-1974 Blade for tractor-operated terracer
7361-1974 Tines for animal-driven cultivators
7565 (Part 1)-1975 Rigid tines for tractor-operated cultivators: Part 1 Rigid tines
7640-1975 Test code for disc harrows
7926-1975 Classification of soil for testing of agricultural machinery
7927-1975 Method of field testing for manaully operated paddy weeder
9217-1979 Test code for agricultural discs
9218-1979 Specification for triangular shovels for animal drawn cultivator
9813-1981 Tractor-mounted blade terracer
9818 (Part 1)-1981 Glossary of terms relating to tillage and intercultivation equipment: Part 1 General Terms
9818 (Part 2)-1981 Glossary of terms relating to tillage and intercultivation equipment: Part 2 Terms relating to equipment
10225-1982 Bearing spools for tractor-operated disc harrows
10233-1982 Tractor-operated disc plough scraper
10239-1982 Blade for tractor-operated scraper
10254-1982 Share for animal-drawn ridger
10691-1983 Share for tractor-operated mouldboard ploughs